

01 07 251720Z FEB 81 PP

HQ ADCOM PETERSON AFB CO//J3//

JOHNSON SPACE CENTER HOUSTON TX//CODE PA//

PERSONAL FROM MGEN B.K. BROWN TO MR. R.G. ROSE

SUBJECT: ADCOM SUPPORT TO SHUTTLE

1. YOU ARE AWARE THAT OUR STAFFS HAVE WORKED CLOSELY FOR MANY MONTHS TO ASSURE ADCOM RESPONSE TO NASA'S STATED SHUTTLE SUPPORT REQUIREMENTS, WHICH INCLUDE EARLY ORBIT DETERMINATION (EODET), CONJUNCTION DATA (COMBO) AND TRACKING AND IMPACT PREDICTION (TIP) FOR THE EXTERNAL TANK. ADDITIONALLY, THE ADCOM STAFF HAS TRIED TO IDENTIFY THOSE THINGS WE MIGHT DO TO PREPARE TO ASSIST NASA IN THE EVENT OF CONTINGENCIES, SUCH AS ANOMALIES OCCURRING IN INJECTION OR MANEUVER BURNS, ET REENTRY, OR ORBITER RECOVERY. IT HAS BEEN OUR OBJECTIVE TO BE ABLE TO SUPPORT YOU FULL UP SHOULD YOU REQUEST IT WHILE AT THE SAME TIME BEING CAREFUL NOT TO GET UNDERFOOT. OUR PLANS WERE BRIEFED TO THE COMMANDER-IN-CHIEF, LT GEN MARTINEZ, ON 27 FEBRUARY AND HE REEMPHASIZED THE ABOVE OBJECTIVE. IN DOING SO, HE RAISED THE ISSUE OF ADCOM'S RADAR TRACKING OF THE SHUTTLE VEHICLE AND POSSIBLE RESULTING RFI TO THE SHUTTLE'S ON-BOARD SYSTEMS; HE DIRECTED THE STAFF CLARIFY THIS ISSUE WITH NASA SOONEST.

LT COL J.B. WILDE, J32/3305
26 FEB 81/ARG

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J.B. WILDE, LT COL, DIR J32/3305

[Signature]

2. OUR PRESENT PLANS CALL FOR THE RADAR SENSORS (DESCRIBED IN PARAGRAPHS 5 AND 6 BELOW) TO TRACK THE SHUTTLE ON EVERY TRACKING OPPORTUNITY DURING ITS FLIGHT; THEIR LOCATIONS, FREQUENCIES, POWER OUTPUTS AND APPROXIMATE CUMULATIVE TRACKING TIME DURING THE 26 REV PROFILE ARE SHOWN. THESE SENSORS GROUP INTO TWO CATEGORIES: FOUR PERFORMING ADCOM'S MISSILE WARNING FUNCTIONS, PAVE PAWS EAST AND WEST, EGLIN PPS-88 AND THE MACDILL FSS-7; AND THE NINE OTHER SPADATS SENSORS. AT THE MISSILE WARNING SITES WE COULD MINIMIZE TRACKING OF THE SHUTTLE GIVEN ACCURATE EPHEMERIDES ON THE ORBITER, BUT WE COULD NOT SHUT DOWN THE SITES WITHOUT DOD DIRECTION. THE SPADATS SITES, ON THE OTHER HAND, COULD BE DIRECTED TO SHUT DOWN OR ALTER TRACKING AS REQUIRED TO PROTECT THE SHUTTLE, SHOULD THAT BE NECESSARY.

3. THE PRICE TO BE PAID FOR RESTRICTING RADIATION BY ADCOM RADARS IS TWOFOLD: (1) IN THE QUALITY OF SUPPORT PROVIDED IN THOSE AREAS SPECIFICALLY REQUESTED BY WADA (ECDET, CONDO, TIF); AND (2) IN OUR ABILITY TO MAINTAIN UP-TO-THE-MINUTE CIRCITAL INFORMATION TO RESPOND QUICKLY TO CONTINGENCIES.

A. WITH RESPECT TO THE FIRST (ECDET, CONDO, TIF), I WOULD NOT RECOMMEND RESTRICTING THE ADCOM SENSORS WITHOUT A FULL UNDERSTANDING ON YOUR PART OF THE IMPLICATIONS OF THE POSSIBLE SUPPORT

DEGRADATIONS THAT MIGHT OCCUR DURING THE CRITICAL FIRST REV OR FROM LAUNCH THROUGH ET REENTRY.

B. WITH RESPECT TO THE SECOND AREA (CONTINGENCY PLANNING), HOWEVER, LIMITATIONS REQUIRED PROBABLY COULD BE APPLIED TO THE ADCOM RADARS WITH LESS CONCERN.

4. YOUR ASSESSMENT AT THE EARLIEST OPPORTUNITY WOULD ENABLE US TO GET UNDER WAY PROMPTLY WITH ANY NECESSARY REPLANNING OF OUR SUPPORT. MY INSTRUCTIONS FROM THE CINC IN THIS REGARD ARE TO PROVIDE 100 PERCENT OF THE SUPPORT YOU HAVE REQUESTED, BUT NOT TO DO ANYTHING ELSE THAT MIGHT HAVE EVEN ONE-HALF OF ONE PERCENT POSSIBILITY OF INTERFERING IN ANY WAY WITH THE SHUTTLE OPERATION. I WOULD HOPE THAT NOTHING WE HAVE PLANNED WOULD FALL INTO THE LATTER CATEGORY; BUT IF SOMETHING DOES, WE NEED TO KNOW SO THAT WE CAN CHANGE OUR SUPPORT PLAN ACCORDINGLY.

5. RADAR SENSOR RADIO FREQUENCY DATA:

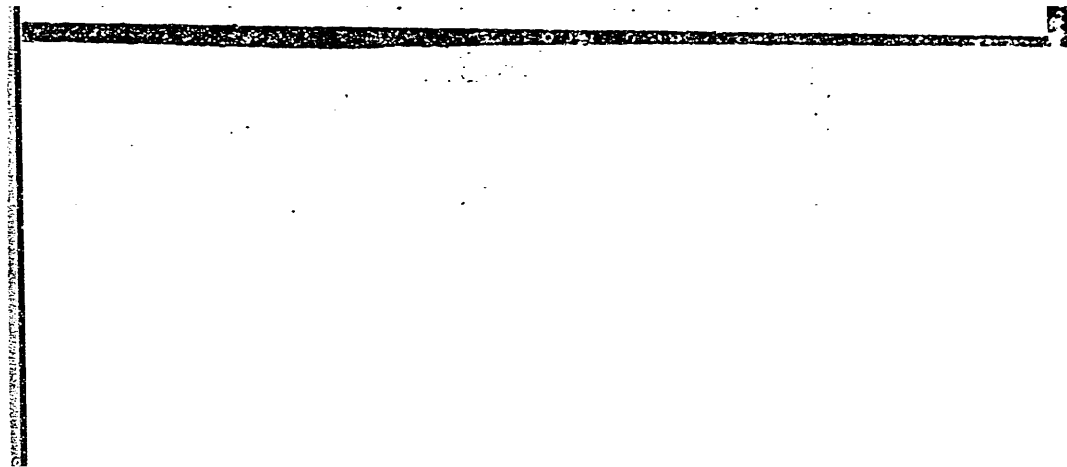
RADAR	BAND	FREQUENCY	REMARKS	APPROX LAT/LONG
PAVE PAWS	UHF	420-450MHZ	21	41/70W
AN/FPS-115				

PHASED ARRAY.

DIRECTED EASTERLY.

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ROI NAMUR ISLAND, VHF 155.5MHZ
 KWAJALEIN
 HILLSTONE HILL UHF 430MHZ LARGE DISH TRACKER. 42/71W
 GROTON, MA L 1295MHZ
 HAYSTACK N 207MHZ LARGE DISH TRACKER. 42/73W
 GROTON, MA
 KESWAPASUR VHF 216.96MHZ VERTICAL PANI CO 33/70-126W
 DANL GREN, VA INTERFEROMETER.
 <COMPUTER CENTER>
 AN/FPQ-14 C 5400-5900 LARGE DISH TRACKER. 17/61W
 ANTIGUA ISLAND MHZ
 AN/FPQ-14 C 5400-5900 LARGE DISH TRACKER. 17/61W
 KAENA POINT, HI MHZ
 AN/FPQ-15 C 5450-5900 LARGE DISH TRACKER. -7/14W
 ASCENSION ISLAND MHZ

L- RADAR SENSOR TRANSMITTER POWER: CUM TRK TIME (MIN)

RADAR	PEAK	FACE	COMMENT
PAVE PARS	60	61	PER FACE.
OTIS			TWO FACES. 56.8
BEALE			TWO FACES. 53.5

Handwritten signature/initials

AN/FPS-85 . b1 b1 ONE PAGE. 21.5

EGLIN, FL

AN/FSS-7 b1 b1 PER TRANSMIT- 6.9

MACDILL AFB, FL

TER: TWO TRANS-

MITTERS OUT POWER

NOT ~~ADDITIVE~~.

AN/FPS-79 b1 b1 56.5

bl
TURKEY

ALCOX b1 b1 64.8

KWAJALEIN

ALTAIR b1 b1 68.3

KWAJALEIN

MILLSTONE HILL b1 b1 73.5

GROTON, MA

HAYSTACK b1 b1 93.5

GROTON, MA

HAYSPASUR b1 b1 AT EACH 0.3

LAKE KICKAPOO, TX

TRANSMITTER

LOCATION LISTED.

bl

GILA RIVER, AZ

JORDAN LAKE, AL

AN/FPQ-34 b1 b1 75.6

ANTIGUA

FPQ-34 b1 b1 75.6

KAENA POINT, HI

AN/FPQ-35 b1 b1 66.5

ASCENSION ISLAND

7. NV PROJECT OFFICERS FOR THIS MATTER ARE LT COL BOB GIFFEN,
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COMMERCIAL (303) 635-8911 EXT 3305.

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